

**ABSTRACT OF THE DISCLOSURE**

Several embodiments of an interleaved generalized convolutional encoder system and method are provided for communicating data over a transmission path in order to inhibit distortion caused by impulse noise or other correlated noise and enhance transmission rate of data communications. The encoder system is designed to introduce a variable delay to the convolutional encoder. The variable delay effectively spreads correlated noise over a variable number of symbols in time. Correlated noise that is spread over time allows for better error correction encoding.

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